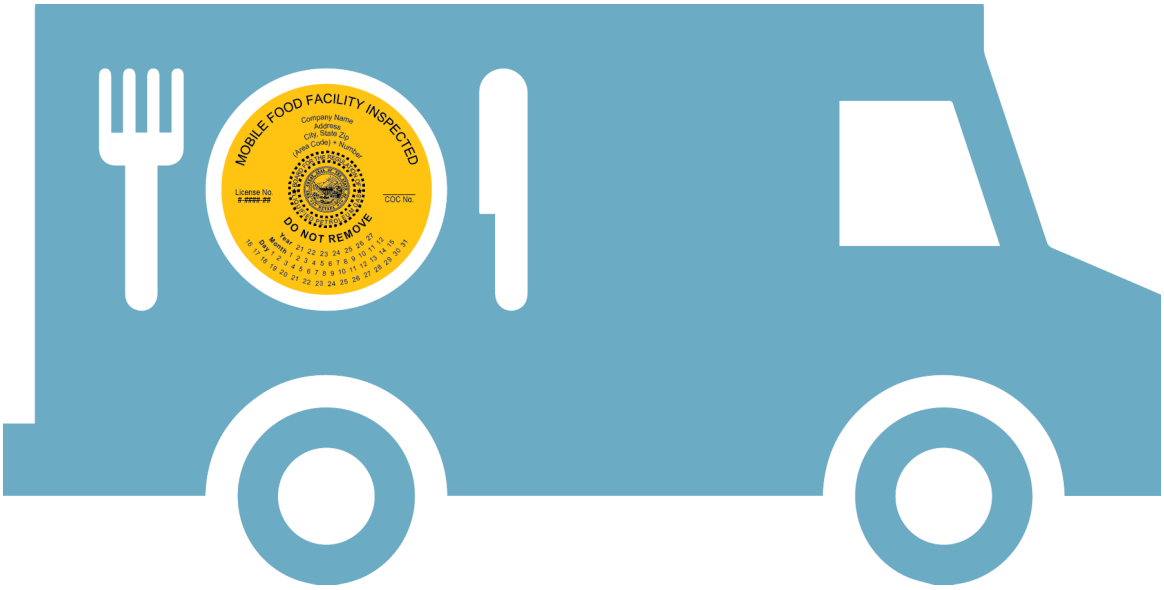
Mobile Food Facility Gas System Check Guidebook



Compiled by the Nevada Board for the Regulation of Liquefied Petroleum Gas

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The Nevada Board for the Regulation of Liquefied Petroleum Gas (LP-Gas Board) is a 6 member State Board whose members are chosen from the following categories, and appointed by the Governor:

- One member who is a volunteer firefighter in a rural area of this State.
- One member who is a firefighter employed by the fire department of a city in this State.
- Two members who are or have been engaged in the sale or distribution of liquefied petroleum gas in this State
- Two members who are representatives of the general public.

The Board has adopted regulations regarding safety for all:

1. Systems for the distribution of liquefied petroleum gas to nine users of liquefied petroleum gas or less;
2. Tanks and appliances for liquefied petroleum gas; and
3. Suppliers and distributors of liquefied petroleum gas to any person or any system for the distribution of liquefied petroleum gas.

The Board also:

1. Provides for the regular inspection of all systems, containers, apparatus and equipment for the storage, distribution, transportation, dispensing or use of liquefied petroleum gas; and
2. Conduct programs on safety relating to liquefied petroleum gas for volunteer firefighters and groups of persons who use liquefied petroleum gas.

It is for these and other reasons that the LP-Gas Board has compiled the voluntary guidelines as recommended in this document using existing industry training programs developed by the Propane Education and Research Council (PERC), and other sources. While the LP-Gas Board compiled the information, it did not independently test or verify the accuracy of the information or methods used to collect the data that supports the conclusions or recommendations reflected in this document. The LP-Gas Board disclaim any liability for any personal injury, property damage, business losses, or other damages of any nature whatsoever, whether special, indirect, consequential or compensatory, directly or indirectly resulting from the publication, use, or reliance on this document, or any information, apparatus, method, process, or similar item disclosed in this document. This disclaimer of liability shall apply even if such loss or damage results, in whole or in part, from any acts or omissions of or by any negligence on the part of the LP-Gas Board or any persons who contributed to the development of the information contained in this document. The LP-Gas Board makes no warranty or guarantee as to the accuracy or completeness of any information published in this document.

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Introduction

There are many methods to safely and efficiently perform mobile food facility gas system checks. The purpose of this booklet is to teach you how to properly complete a Mobile Food Facility Gas System Check form that will provide your company with important documentation of a gas system inspection.

The following codes apply to installation and operation of the gas system on a Mobile Food Facility and should be referred to when performing the gas system check:

- National Fire Protection Association (NFPA) 58 *Liquefied Petroleum Gas Code*
- International Code Council (ICC) *International Fire Code (IFC)*

Please be aware that all information recorded on the Mobile Food Facility Gas System Check form in this booklet, including serial numbers, test stage locations, and pressure readings, are sample results used for teaching purposes only. Your results will differ depending on the equipment and checks completed at each customer location.

In addition, not all types of gas system tests and checks are performed and documented in this booklet. For other examples of how to document typical tests and checks that may be performed as part of a Mobile Food Facility Gas System Check, please review the appendix section of this Mobile Food Facility Gas System Check booklet. You should check with your supervisor for any company-specific documentation requirements.

This booklet does not cover all the checks and requirements for placing new gas distribution systems or appliances into operation. One method to address these requirements is through training courses provided by the Certified Employee Training Program, or CETP. This propane industry program also provides training and important additional information on the placement of containers, gas piping, and regulator installation. It is recommended that appropriate CETP courses be completed prior to conducting a Mobile Food Facility Gas System Check, as this program is based on the CETP curriculum and NFPA code requirements.

To learn more about training courses and materials available through CETP, visit www.propane.com

What Is the Mobile Food Facility Gas System Check?

A Mobile Food Facility is defined by NFPA 58 as "a movable commercial or retail food facility" but they are more commonly known as "food trucks". Mobile Food Facilities range in size from a push cart that sells hotdogs to a semi trailer that is cooking meals for wildland fire crews, or a large festival staff. Most cities are familiar with food trucks or trailers parked on street corners or at a local festival.

A **Mobile Food Facility Gas System Check** is a voluntary set of guidelines for inspecting mobile food facility vapor distribution systems. Technicians should be familiar with the codes, standards, and regulations adopted in their jurisdiction and should follow them when performing a Mobile Food Facility Gas System Check inspection. Such inspection is not intended to replace, alter, or amend any state or local codes, standards, or regulations applicable to residential and small commercial vapor distribution systems.

A Mobile Food Facility Gas System Check is also *not* intended to replace, alter, or amend your company's policies and procedures. Those performing the inspections should be familiar with those policies and procedures and should follow them when performing an inspection. Make sure you are properly trained before conducting a Mobile Food Facility Gas System Check.

A Mobile Food Facility Gas System Check covers:

- Vehicle & Operator Info
- Container Check
- Pigtail & Hose Check
- Regulator Check
- Piping Check
- Appliance Check
- System Leak Check
- Miscellaneous Checks
- Customer Safety Information Review and Acknowledgement

Please be aware that lack of training, equipment, or parts might prevent you from correcting all problems and issues identified during an inspection.

In addition, you should always consult your company's policies and procedures before taking equipment out of service or replacing and repairing equipment. You may also discover a problem or issue, making the system or a component of the system unsafe for the customer to operate. In that circumstance, you should consult your company's policies and procedures in determining steps to be taken.

Advise your supervisor or other qualified person if you encounter a problem or issue that you are not trained to address.

What the Mobile Food Facility Gas System Check Is NOT

Mobile Food Facility Gas System Check is NOT intended to cover latent or manufacturing defects, or the internal working of sealed equipment or structural components. It also does not cover future or unforeseen happenings.

Mobile Food Facility Gas System Check is NOT intended to establish an industry custom, practice, or standard. No licensee is required to adopt or implement these guidelines, or any part of those guidelines, in order to provide inspection services to Mobile Food Facilities.

Mobile Food Facility Gas System Check is NOT intended to replace, alter, or amend any state or local codes, standards, or regulations applicable to Mobile Food Facility gas systems and appliances. Licensees should be familiar with the codes, standards, and regulations adopted in their particular jurisdiction and should follow them when performing an inspection.

Mobile Food Facility Gas System Check is NOT intended to replace, alter, or amend any particular licensees internal policies and procedures. Those performing Mobile Food Facility inspections should be familiar with those policies and procedures and should follow them when performing inspection.

Mobile Food Facility Gas System Check is NOT intended to provide training on the operation and servicing of Mobile Food Facility or gas appliances. Mobile Food Facility Gas System Check includes inspection forms which serve as an organized reference for inspecting Mobile Food Facilities and appliances. Mobile Food Facility Gas System Check addresses inspection items to cover. In each case, the Mobile Food Facility Gas System Check inspection should be performed by a trained and qualified person familiar with the inspection form and the scope and nature of the inspection to be performed.

Mobile Food Facility Gas System Check is NOT just a leak check. While the Mobile Food Facility Gas System Check includes a leak check, it is not limited to that check. Those performing a Mobile Food Facility Gas System Check inspection should be familiar with the inspection form and should know the scope of the inspection before it is performed.

Steps to Take Before Starting a Mobile Food Facility Gas System Check

You will need to take the following steps and actions before you begin a Mobile Food Facility Gas System Check at a customer's location:

1. Fill out vehicle & operator information and verify with the customer that the information is complete and accurate.

2. Show the customer the Mobile Food Facility Gas System Check form and explain the procedure. It is important that the customer understands the scope of the inspection and/or testing you will be doing. Answer any questions the customer has before proceeding with your inspection.

3. Obtain information from the customer regarding the gas system. Before proceeding with the inspection, find out from the customer:

   - Whether there have been any recent changes to the gas system or gas appliances, including but not limited to whether any appliances have been recently removed or installed.
   - Whether there has been any construction, repairs, or maintenance work done recently on or near the gas system.
   - Whether there have been any recent problems with the gas system.
   - Whether there have been any unusual smells or odors indicative of a possible gas leak.
   - Whether the gas system has been exposed to fire or any other unique environmental condition that could possibly impact its operation.

Vehicle & Operator Info

VEHICLE & OPERATOR INFO

Vehicle VIN No.			Vehicle License No.		
Company Name		Operator Name			
Address					
City		State		Zip	
Email			Telephone		

- ☐ **Vehicle VIN No.:** Enter the Vehicle Identification Number (VIN) of the vehicle you are inspecting.
- ☐ **Vehicle License No.:** Enter the license plate number of the vehicle you are inspecting.
- ☐ **Company Name:** Enter the name of the company that owns/leases the vehicle.
- ☐ **Operator Name:** Enter the name of the person operating the vehicle you are inspecting.
- ☐ **Address:** Enter the address of the company that owns/leases the vehicle.
- ☐ **City:** Enter the city of the company that owns/leases the vehicle.
- ☐ **State:** Enter the state of the company that owns/leases the vehicle.
- ☐ **Zip:** Enter the zip code of the company that owns/leases the vehicle.
- ☐ **Email:** Enter the email address of the company that owns/leases the vehicle.
- ☐ **Telephone:** Enter the telephone number of the company that owns/leases the vehicle.

Container Check

CONTAINER CHECK

Container Type	ASME ☐ DOT ☐	ASME ☐ DOT ☐	ASME ☐ DOT ☐	ASME ☐ DOT ☐
Manufacturer				
Serial No.				
Mfg. Date				
Recert Date	N/A ☐	N/A ☐	N/A ☐	N/A ☐
Water Capacity (WC)	gal. ☐ lb. ☐	gal. ☐ lb. ☐	gal. ☐ lb. ☐	gal. ☐ lb. ☐
Proper Condition[1]?	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Proper Location[2]?	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Status	PASS ☐ FAIL ☐	PASS ☐ FAIL ☐	PASS ☐ FAIL ☐	PASS ☐ FAIL ☐

[1] Containers do not have evidence of damage, dents, gouges, excessive corrosion, exposure to fire, or leaks
[2] Containers are securely mounted, protected from damage. are NOT mounted on the roof, ahead of the front axle (on a drive vehicle), or beyond the rear bumper. Containers are NOT installed (unless allowed by NFPA 58), transported, or stored inside the vehicle. Containers are NOT installed less than 18" from a heat producing appliance, component, or vent

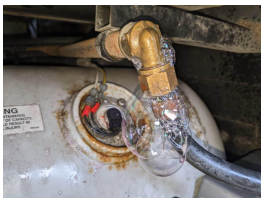
The maximum aggregate propane capacity of containers on the vehicle used for cooking appliances is ≤ 200 lbs.	PASS ☐ FAIL ☐

- ☐ **Container Type:** Check the appropriate "ASME" or "DOT" box
- ☐ **Manufacturer:** Enter the manufacturer's name that is found on the ASME data plate, on DOT cylinders, it is found stamped into the neck ring or cylinder collar.
- ☐ **Serial No.:** Enter the serial number of the container. On ASME tanks, it is found on the data plate. On DOT cylinders, it is found stamped into the neck ring or cylinder collar.
- ☐ **Mfg. Date**: Enter the manufacture date of the container. On ASME tanks, it is found on the data plate (YYYY). On DOT cylinders, it is found stamped into the neck ring or cylinder collar (MM-YY).
- ☐ **Recert Date:** Enter the most recent cylinder requalification date. On DOT cylinders it will be in the MM-YY format and may be followed by the letter "E" or "S". If there is not a requalification date on a DOT cylinder or if it is an ASME tank, check the "N/A" box.
- ☐ **Water Capacity (WC):** Enter the water capacity (WC) of the container. ASME tanks are sized in gallons. DOT cylinders are sized in pounds.
- ☐ **Proper Condition[1]?:** Inspect the container. If it is suitable for continued service, check the "YES" box. If it is NOT suitable for continued service, check the "NO" box.
- ☐ **Proper Location[2]?:** Inspect the container. If it is installed in a suitable location, check the "YES" box. If it is NOT installed in a suitable location, check the "NO" box.
- ☐ **Status:** If your inspections indicate that the container meets the installation requirements of NFPA 58 and is suitable for continued service, check the "PASS" box, if it is does not, check the "FAIL" box and detail the reason in the "Notes" section
- ☐ **The maximum aggregate propane capacity of containers on the vehicle used for cooking appliances is ≤ 200 lbs.:** Calculate the propane capacity of the containers on the vehicle. If the aggregate propane capacity of the containers used for cooking appliances is ≤ 200 lbs., check the "PASS" box. IF the capacity is greater than 200 lbs., check the "FAIL" box.

Proper Condition

Inspect the Container and attachments - Check for pits, dents, gouges, bulges, rust, corrosion, or fire damage. Check welds and seams for rust and corrosion. Inspect the container attachments and look for missing bolts, rust, and damage.

Field Welding on Containers - Welding shall be limited to attachments to non-pressure parts such as saddle plates, wear plates, brackets, or foot rings applied by the container manufacturer.



Conduct a Leak Test - Check for leakage on each of the appurtenances, including the threaded connections into the container. If a leak is detected, it should be repaired and retested. If you are unable to safely repair the leak, you should remove the container from service.

Proper Location

Check the Location - When validating the location requirements for LP-Gas containers, you should check NFPA 58 requirements. To verify the container is installed properly and is safe for continued service, you should check the following:

- ☐ Containers shall be mounted securely on the vehicle or within the enclosing recess or cabinet.
- ☐ Containers shall be installed either on the outside of the vehicle or in a recess or cabinet that complies with the following:
  - ☐ Vapor-tight to the inside of the vehicle.
  - ☐ Accessible from and vented to the outside.
  - ☐ Vents located near the top and bottom of the enclosure and 3 ft (1 m) horizontally away from any opening into the vehicle below the level of the vents.

- ☐ Containers shall be installed so that no gas from fueling and gauging operations can be released inside of the passenger or enclosed compartments of the vehicle.
- ☐ Containers shall NOT be mounted directly on roofs, ahead of the front axle (on drive vehicles), or beyond the rear bumper of the vehicle. The preferred location to mount DOT cylinders on trailers is on the tongue end.
- ☐ No part of a container or its appurtenances protrudes beyond the sides or top of the vehicle.
- ☐ Containers shall be installed with as much ground clearance as practicable. Clearance is measured to the bottom of the container or the lowest fitting, support, or attachment on the container or its housing, if any, whichever is lowest.

- ☐ Containers installed <u>between axles</u> shall NOT be lower than the lowest point forward of the container with the vehicle suspension under full-rated load compression on the following points:
  - ☐ Lowest structural component of the body, frame, or subframe.
  - ☐ Lowest point on the engine or transmission (including the clutch housing or torque converter housing, as applicable)

- ☐ Containers installed <u>behind the rear axle</u> and extending below the frame shall NOT be lower than the lowest of the following points and surfaces with the vehicle suspension under full-rated load compression:
  - ☐ Containers shall NOT be lower than the lowest point of a structural component of the body, engine, and transmission (including clutch housing or torque converter housing, as applicable) forward of the container.
  - ☐ Containers shall NOT be lower than lines extending rearward from each wheel at the point where the wheels contact the ground directly below the center of the axle to the lowest and most rearward structural interference.

- ☐ Containers shall be mounted to prevent jarring loose and slipping or rotating, and the fastenings shall be designed and constructed to withstand, without permanent visible deformation, static loading in any direction equal to four times the weight of the container filled with fuel. Where containers are mounted within a vehicle housing, the securing of the housing to the vehicle shall comply with this provision. Any removable portions of the housing or cabinet shall be secured while in transit.

Container Appurtenances

- ☐ Appurtenances must be protected to prevent damage from accidental contact with stationary objects; from loose objects, stones, mud, or ice thrown up from the ground or floor; and from damage due to overturn or similar vehicular accident.

- ☐ Main shutoff valves on containers shall be readily accessible and easily operated.

Specific Requirements for ASME Tanks

- ☐ Verify the Container is an ASME <u>Mobile</u> Fuel Container - Stationary ASME containers do not have the valve protection or mounting attachments that are required for vehicular applications and should NOT be used on Mobile Food Facilities.

- ☐ Check the Data Plate - All information must be legible.

- ☐ Check the Maximum Allowable Working Pressure (MAWP) - When inspecting the data plate verify the MAWP (sometimes marked "WP") meets the following requirements:

- ☐ ASME mobile containers mounted on the OUTSIDE of a passenger vehicle (e.g. truck) shall have a MAWP of 312 psig (2.2 MPag) or higher.
- ☐ ASME mobile containers mounted on the OUTSIDE of a non-passenger vehicle (e.g. trailer or push cart) shall have a MAWP of 250 psig (1.7 MPag) or higher.
- ☐ ASME mobile containers mounted on the INSIDE of a vehicle shall have a MAWP of 312 psig (2.2 MPag) or higher.

ASME containers located inside of the vehicle are rare, but are allowed by NFPA 58. If there is an ASME container inside the vehicle verify that it complies with the following:

- ☐ ASME containers mounted on the interior of passenger-carrying vehicles shall have the container and its appurtenances installed in an enclosure that is securely mounted to the vehicle that is gastight with respect to driver or passenger compartments and to any space containing spark-producing equipment. The enclosure shall be vented to the outside of the vehicle.
  OR;
- ☐ The container appurtenances and their connections shall be installed in an enclosure that is securely mounted on the container. The appurtenances and their connections shall be installed in an enclosure that is gastight with respect to the driver or passenger compartments and to any space containing spark-producing equipment. The enclosure shall be vented to the outside of the vehicle.

- ☐ Enclosures, structures, seals, and conduits used to vent container and appurtenance enclosures shall be designed and fabricated of durable materials and shall be designed to resist damage, blockage, or dislodgement through movement of articles carried in the vehicle or by the closing of compartment enclosures or vehicle doors and shall require the use of tools for removal.

- ☐ The pressure relief valve on a container mounted on the interior of vehicles shall be piped to the outside of the vehicle.

ASME Container Appurtenances - Inspect the valves and gauges:

- ☐ Filler Valve - Remove the cap slowly in case gas is trapped under the cover. Check the surface and threads of the valve for dents and nicks. Check the filler gasket for cracks or deterioration.

- ☐ Service Valve - Check for outward damage and that it will close easily in the event of an emergency.

- ☐ Fixed Maximum Liquid Level Gauge - Open the valve slowly and verify gas is flowing. Check for damage and blockage. Be sure it doesn't leak when closed hand tight.

- ☐ Liquid Level Float Gauge - Check for outward damage, rust, or corrosion, and that the dial is legible.

- ☐ All container inlets, outlets, or valves installed in container inlets or outlets, except pressure relief devices and gauging devices, shall be labeled to designate whether they communicate with the vapor or liquid space.

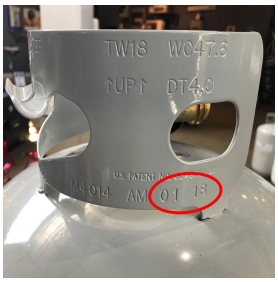
- ☐ Relief Valve - Check for outward damage. Never look directly into a relief valve. Use a mirror to check for blockage of the drain hole and debris in the relief valve. Be sure the relief valve is communicating with the vapor space of the container. The pressure relief discharge on ASME containers shall:

  - ☐ Be directed upward or downward within 45 degrees of vertical.
  - ☐ NOT directly impinge on the vehicle fuel container(s), the exhaust system, or any other part of the vehicle.
  - ☐ NOT be directed into the interior of the vehicle.
  - ☐ Have a protective cover.

- ☐ If the pressure relief valve is required to be piped away from the interior of the vehicle, or to avoid prohibited exposures, it must comply with the following:

  - ☐ A breakaway adapter shall be installed and have a melting point of not less than 1500°F (816°C).
  - ☐ The adapter either shall be an integral part of the pressure relief valve or shall be a separate adapter attached directly to the pressure relief valve.
  - ☐ The pipeaway system shall be designed and installed to prevent failure due to thermal or mechanical stress.
  - ☐ Where used, nonmetallic hose shall be as short as practicable and shall be able to withstand the downstream pressure from the relief valve in the full open position, and the hose shall be fabricated of materials resistant to the action of LP-Gas.
  - ☐ Where hose is used to pipe away the relief valve discharge, the breakaway adapter and any attached fitting shall deflect the relief valve discharge upward or downward within 45 degrees of vertical. If an additional fitting is necessary to meet this requirement, it shall have a melting point not less than 1500°F (816°C).
  - ☐ The pipeaway system shall have a protective cover to minimize the possibility of the entrance of water or dirt into either the relief valve or its discharge system.
  - ☐ No portion of the system shall have an internal diameter less than the internal diameter of the recommended breakaway adapter.
  - ☐ The breakaway adapter either shall be threaded for direct connection to the relief valve and shall NOT interfere with the operation of the relief valve or shall be an integral part of the pressure relief valve. It shall break away without impairing the function of the relief valve.
  - ☐ The pipeaway system connections shall be mechanically secured and shall NOT depend on adhesives or sealing compounds and shall NOT be routed between a bumper system and the vehicle body.

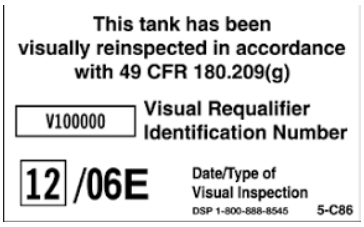
Specific Requirements for DOT Cylinders



- ☐ Check the manufactured and/or requalification dates:

  - ☐ DOT cylinder manufacture dates will be marked on the cylinder neck ring or shoulder in the MM-YY format. 12 years after the cylinder manufacture date the cylinder must be requalified before it can be filled.

- ☐ DOT cylinder requalification date will be marked on the cylinder neck ring or shoulder in the same MM-YY format as the manufacture date and may be followed by the letters "E" or "S". The requalifier will also mark their Requalifier Identification Number (RIN) next to the requalification date in the ###### format:
  - ☐ Volumetric expansion method: MM-YY and is valid for 12 years from the date (e.g. 07-21).
  - ☐ Proof-pressure method: MM-YY followed by the letter "S" is valid for 10 years from the date (e.g. 07-21S).
  - ☐ External Visual method: MM-YY followed by the letter "E" is valid for 5 years from the date (e.g. 07-21E).



DOT Container Appurtenances - Inspect the valves and gauges:

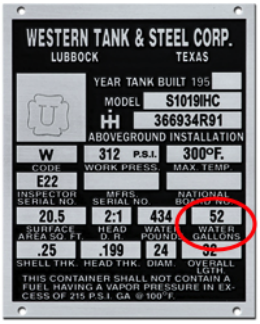
☐ Filler Valve (if equipped) - Remove the cap slowly in case gas is trapped under the cover. Check the surface and threads of the valve for dents and nicks. Check the filler gasket for cracks or deterioration.

☐ Service Valve - Check for outward damage and that it will close easily in the event of an emergency.

☐ Fixed Maximum Liquid Level Gauge - Open the valve slowly and verify gas is flowing. Check for damage and blockage. Be sure it doesn't leak when closed hand tight.

- ☐ Liquid Level Float Gauge (if equipped) - Check for outward damage, rust, or corrosion, and that the dial is legible.
- ☐ Relief Valve - Check for outward damage. Never look directly into a relief valve. Use a mirror to check for blockage of the drain hole and debris in the relief valve. Be sure the relief valve is communicating with the vapor space of the container.

Propane Capacity



ASME Tank

Propane Capacity (PC) in <u>pounds</u> = Water Capacity (WC) in <u>gallons</u> x 3.36

Example: 52 x 3.36 = 174.7 lb. propane capacity.

DOT Cylinder

Propane Capacity (PC) in <u>pounds</u> = Water Capacity (WC) in <u>pounds</u> x 0.42

Example: 71.4 x 0.42 = 30 lb. propane capacity.

Pigtail & Hose Check

PIGTAIL & HOSE CHECK

Pigtails are listed to UL-569	PASS ☐ FAIL ☐ N/A ☐
LP-Gas hoses are listed to UL-21 and are installed outside of the vehicle	PASS ☐ FAIL ☐ N/A ☐
Hoses are marked "LP-GAS HOSE" or LPG HOSE", and have a minimum working pressure (WP) of 350 psig	PASS ☐ FAIL ☐ N/A ☐
Pigtails and hoses do not have evidence of damage, cracking, cuts, bulges, kinks, exposure to fire, or leaks	PASS ☐ FAIL ☐

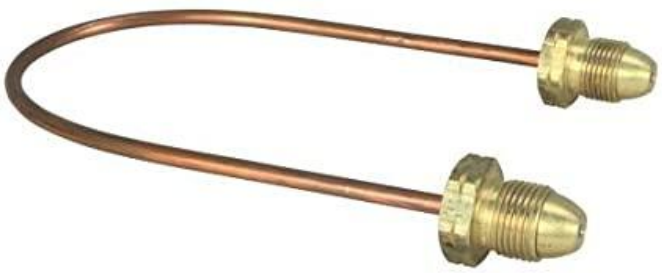
- ☐ **Pigtails are listed to UL-569:** If the pigtail is listed to UL-569, check the "PASS" box. If it is not listed to UL-569, check "FAIL". If the regulator is connected directly to the service valve without the use of a pigtail, check the "N/A" box.
- ☐ **LP-Gas hoses are listed to UL-21 and are installed outside of the vehicle:** If the hoses are listed to UL-21 AND installed outside of the vehicle, check the "PASS" box. If they are not listed to UL-21 OR they are installed inside of the vehicle, check "FAIL". If there are not any hoses installed on the vehicle, check the "N/A" box.
- ☐ **Hoses are marked "LP-GAS HOSE" or LPG HOSE", and have a minimum working pressure (WP) of 350 psig:** If the hoses are properly marked and have a minimum WP of 350 psig, check the "PASS" box, If the hoses are NOT properly marked OR have a minimum WP less than 350 psig, check the "FAIL" box. If there are not any hoses installed on the vehicle, check the "N/A" box.
- ☐ **Pigtails and hoses do not have evidence of damage, cracking, cuts, bulges, kinks, exposure to fire, or leaks:** If your inspections indicate that the pigtails and/or hoses are suitable for continued service, check the "PASS" box, if they do not, check the "FAIL" box and detail the reason in the "Notes" section.

Pigtails

Check Pigtails for the following:

- ☐ Listed to UL-569 - *Standard for Pigtails and Flexible Hose Connectors for LP-Gas.*

- ☐ Inspect the entire length of the pigtail and remove it from service if there is evidence of the following:

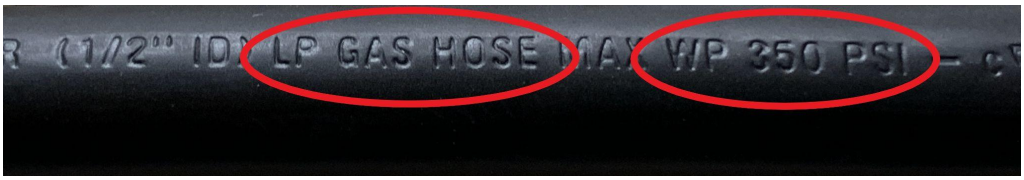


- ☐ Physical damage.
- ☐ Modification.
- ☐ Cracking.
- ☐ Cuts.
- ☐ Bulges.
- ☐ Kinks.
- ☐ Exposure to fire.
- ☐ Corrosion.
- ☐ Leaks

Hoses

Check hoses for the following:

- ☐ Listed to UL 21 - *Standard for LP-Gas Hose*.
- ☐ Hose shall be designed for a working pressure of 350 psig (2.4 MPag) and continuously marked with the following information:
  - ☐ LP-GAS HOSE or LPG HOSE.
  - ☐ Maximum working pressure (WP).
  - ☐ Manufactures' name or coded designation.
  - ☐ Month or quarter and year of manufacture.
  - ☐ Product identification.



- ☐ Hose ends are fully installed on the barbed fitting with a properly crimped ferrule that will not allow the hose to be pulled off the barbed fitting.
- ☐ Inspect the entire length of the hose and remove it from service if there is evidence of the following:
  - ☐ Physical damage.
  - ☐ Modification.
  - ☐ Cracking.
  - ☐ Cuts.
  - ☐ Bulges.
  - ☐ Kinks.
  - ☐ Exposure to fire.
  - ☐ Leaks.

Regulator Check

REGULATOR CHECK

Regulator Type	Outlet Set Pressure	Flow Pressure	Lock Up Pressure	Status
Integral Two-Stage	psi ☐ w.c. ☐	psi ☐ w.c. ☐	psi ☐ w.c. ☐	PASS ☐ FAIL ☐ N/A ☐
First Stage	psi	psi	psi	PASS ☐ FAIL ☐ N/A ☐
Middle Stage	psi	psi	psi	PASS ☐ FAIL ☐ N/A ☐
Final Stage	w.c.	w.c.	w.c.	PASS ☐ FAIL ☐ N/A ☐

Regulators **NOT** installed in a compartment have their vents installed pointing down or protected by a durable cover	PASS ☐ FAIL ☐ N/A ☐
IF the regulators are installed in a compartment, the compartment is vented	PASS ☐ FAIL ☐ N/A ☐
IF the regulator is connected directly to the **piping**, flexibility is provided between the container valve and the regulator (e.g. pigtail, hose)	PASS ☐ FAIL ☐ N/A ☐
IF the regulator is installed directly in the **container valve**, flexibility is provided between the regulator and the piping (e.g. hose).	PASS ☐ FAIL ☐ N/A ☐
Regulators do not have evidence of excessive corrosion, damage, exposure to fire, or leaks	PASS ☐ FAIL ☐

- ☐ **Regulator Type:** Complete the row for each type of regulator installed on the vehicle.
- ☐ **Outlet Set Pressure:** Check the set pressure of the regulator(s) and enter it in the appropriate row. For the integral two-stage check the "psi" box if the set pressure is pounds (e.g. 2 psi regulator). Check the "w.c." box if the set pressure is in inches of water column.
- ☐ **Flow Pressure:** Check the flow pressure of the regulator(s) and enter it in the appropriate row. For the integral two-stage check the "psi" box if the flow pressure is pounds (e.g. 2 psi regulator). Check the "w.c." box if the flow pressure is in inches of water column.
- ☐ **Lock Up Pressure:** Check the lock up pressure of the regulator(s) and enter it in the appropriate row. For the integral two-stage check the "psi" box if the lock up pressure is pounds (e.g. 2 psi regulator). Check the "w.c." box if the lock up pressure is in inches of water column.
- ☐ **Status:** Inspect the regulator. If it is suitable for continued service, check the "PASS" box. If it is NOT suitable for continued service, check the "FAIL" box and detail the reason in the "Notes" section. any of the regulator types is not installed on the vehicle, check the "N/A" box.
- ☐ **Regulators NOT installed in a compartment have their vents installed pointing down or protected by a durable cover:** Inspect the regulator. If the vent is properly protected, check the "PASS" box. If it is NOT properly connected, check the "FAIL" box and detail the reason in the "Notes" section. If the regulator is installed in a compartment, check the "N/A" box.
- ☐ **IF the regulators are installed in a compartment, the compartment is vented:** If the regulator is NOT installed in a compartment, check the "N/A" box. If the regulator IS installed in a compartment, inspect the compartment. If it is properly vented, check the "PASS" box. If it is NOT properly vented, check the "FAIL" box and detail the reason in the "Notes" section.
- ☐ **IF the regulator is connected directly to the piping, flexibility is provided between the container valve and the regulator (e.g. pigtail, hose):** If the regulator is NOT connected directly to the piping, check the "N/A" box. If the regulator IS connected directly to the piping, verify appropriate flexibility is provided. If appropriate flexibility is provided, check the "PASS" box. If appropriate flexibility is NOT provided, check the "FAIL" box and detail the reason in the "Notes" section.
- ☐ **IF the regulator is installed directly in the container valve, flexibility is provided between the regulator and the piping (e.g. hose):** If the regulator is NOT installed directly in the container valve, check the "N/A" box. If the regulator IS installed directly in the container valve, verify appropriate

flexibility is provided. If appropriate flexibility is provided, check the "PASS" box. If appropriate flexibility is NOT provided, check the "FAIL" box and detail the reason in the "Notes" section.

- ☐ **Regulators do not have evidence of excessive corrosion, damage, exposure to fire, or leaks:** Inspect the regulator. If it is suitable for continued service, check the "PASS" box. If it is NOT suitable for continued service, check the "FAIL" box and detail the reason in the "Notes" section.

Regulator Check

A Mobile Food Facility Gas System Check includes a regulator check. In addition to recording information on the vent position of the regulators and verifying that they are properly installed. The regulators are checked for set pressure to verify they are appropriate for the application, flow pressure to check the capacity of the system, and lock-up pressure which measures the delivered pressure to the gas appliances with no gas demand.

Regulators vary by manufacturer and application; manufacturer's instructions and service literature should be consulted, if they are available, to determine the correct way to perform the various tests on a given system.

If the regulator is not functioning properly, either replace it if trained to do so, or take the system out of service according to your company policy until necessary repairs can be made. Be sure to follow your company policy when conducting set, flow, and lock-up testing or when replacing a regulator.

Regulator Type

Identify the type of regulator that is installed on the vehicle.

- ☐ Integral Two-Stage - These regulators combine a first stage regulator and a second or middle stage regulator into one compact unit. Outlet pressure is typically 11" w.c., but some are set at 2 psi. The inlet is connected directly to container pressure. They are painted in various colors.

☐ First Stage - Outlet pressure is typically set at 5 or 10 psi. They are installed upstream of a second stage or middle stage regulator, and the inlet is connected directly to container pressure. They are commonly painted red.

☐ Middle Stage - Outlet pressure is typically set at 2 psi. They are installed between the first and final stage regulator. They are commonly painted blue.

☐ Final Stage - Outlet pressure is typically set at 11" w.c. They can be installed downstream of a first stage or middle stage regulator, or directly to container pressure. When they are installed downstream of a first stage regulator they are called a "second stage" regulator. If they are installed directly to container pressure they are called a "single stage" regulator, They are painted in various colors.

☐ Single stage regulators may ONLY be used for portable appliances and outdoor cooking appliances with input ratings ≤ 100,000 btu/hr (29 kW).

Outlet Set Pressure

Outlet set pressure is the pressure that the regulator is set to operate at. It is checked by installing a pressure gauge in the outlet of the regulator. For regulators with a set pressure less than ½ psi, a manometer will be used to check the pressure. For regulators with a set pressure greater than ½ psi, a pound gauge will be used.

- ☐ Outlet Set Pressure - Install the pressure gauge in the regulator outlet then slowly introduce gas into the system. Read the pressure on the gauge and record it on the form.

Flow Pressure

Flow pressure is tested to ensure that appliances are receiving an adequate amount of propane at the manufacturer's recommended pressure. Flow pressure is affected by friction loss within piping. Performing a flow test as close as possible to an appliance helps verify that the container, piping, and regulator(s) are properly sized.

- ☐ Flow Test Procedure APPLIANCE - These flow test procedures are based on common industry practices and manufacturer's recommendations:

  Step 1: Install your manometer in the test tap of the appliance shutoff valve farthest from the regulator. Many appliance gas control valves have an inlet test port that can be used as well to measure the flow and lock up.
  Step 2: Operate all available propane appliances at full operating capacity.
  Step 3: Check the delivered pressure shown on the manometer while the appliances are operating.

- ☐ Flow Test Procedure SECOND-STAGE OR FINAL-STAGE REGULATOR - IF adequate flow pressure is not maintained with all connected gas appliances operating, perform the flow test at the second-stage regulator or final-stage regulator.

IF the pressure is incorrect, check the following:

- Verify that the regulator output capacity adequately supplies all connected appliances. If it does not, install a larger capacity regulator, then leak check the system, and repeat the flow pressure test. Verify that the new regulator has adequate capacity for the load.
- If the regulator is sized adequately, then adjust it to the desired flow pressure in accordance with the manufacturer's recommendations.
- Verify the proper sizing and output pressure adjustment of upstream pressure regulators. The service regulator upstream of the regulator being flow-pressure tested may not be properly sized or may not be providing sufficient output pressure for gas appliance demand.

If the pressure at the second-stage or final-stage regulator is correct:

- Piping may be undersized, kinked, or blocked. This problem cannot be fixed by adjusting the output pressure of the regulator being tested. Contact your supervisor for guidance.

- ☐ Flow Test Procedure 2-PSI OR FIRST-STAGE REGULATOR - IF you test the pressure at the inlet side of a second-stage or final-stage regulator and find the pressure to be inadequate under normal flow conditions, you will need to test the flow at the 2-psi or first-stage regulator. These procedures are based on common industry practices and manufacturer's recommendations:

Step 1: Install a suitable pressure-measuring device on the outlet side of the first-stage regulator that measures in pounds, such as a 0-30 pounds per square inch gauge (psig).
Step 2: Operate all available propane appliances at full capacity.
Step 3: Check the delivered pressure shown on the gauge with the appliances operating. You may need to install a different first-stage regulator that can meet the demands of the second-stage regulator if the required pressure is not achieved.

Lock-Up Pressure

Lock-up pressure is the amount of pressure necessary to seal off the regulator inlet orifice to stop the propane from flowing when there is no demand. A lock-up test measures the amount of delivered pressure to an appliance with no demand to ensure that the regulator will shut off the flow of propane when the appliances are not in use. Regulator lock-up pressure will always be higher than the regulator or system flow pressure but must not exceed a specific pressure as set by the regulator manufacturer.

☐ Lock-Up Pressure Test SECOND OR INTEGRAL 2-STAGE REGULATOR - To perform the lock-up test for a second or integral 2-stage regulator:

Step 1: Place the pressure-measuring device anywhere in the system downstream of the regulator being measured. Selecting the appropriate test tap location will depend on the type of regulator being tested, its output pressure, and the pressure measuring device. Often, this test is performed at the same test location as the flow test previously discussed.
Step 2: Turn all appliance controls off.
Step 3: Close the appliance shutoff valves to any appliance without a 100% pilot safety shutoff device.
Step 4: Leave the container service valve open to maintain system pressure. With no gas flowing through the appliances, the pressure will increase slightly and then stop. This indicates the lock-up pressure. The lock-up pressure should not exceed 14" w.c. Verify the regulator manufacturer's pressure lock-up specifications.
Step 5: Watch the pressure for at least one minute or until there is a steady reading. If the flow pressure was 11" w.c., then the lock-up pressure should not exceed the maximum rating on the gas control valve, typically 14" w.c.
Step 6: If you do not see an increase in pressure downstream of the regulator, then the regulator has adequate pressure for lock up. If the outlet pressure of the regulator is too high, then either the regulator is malfunctioning or the regulator inlet pressure is too high. In this case, you will need to perform a lock-up test at the first-stage regulator to determine the problem.

☐ Lock-Up Pressure Test FIRST-STAGE OR 2-PSI REGULATOR - To perform the lock-up test for a first-stage or 2-psi regulator:

Step 1: Locate the pressure measuring device on the outlet side of the first-stage or 2-psi regulator.
Step 2: Turn all appliance controls off.
Step 3: Close the appliance shutoff valves to any appliance without a 100% pilot safety shutoff device.
Step 4: Leave the container service valve open to maintain system pressure. With no gas flowing through the appliances, the pressure will increase slightly and then stop. This indicates the lock-up pressure. Watch the pressure for at least one minute or long enough to acquire a steady reading. The lock-up pressure should not exceed the regulator manufacturer's pressure lock-up specification.
Step 5: If the pressure exceeds the manufacturer's specifications, the regulator is not seating properly and it must be replaced or repaired according to the manufacturer's instructions and your company policy.

Regulator Vents

- ☐ Regulators shall be installed with the pressure relief vent opening pointing vertically downward to allow for drainage of moisture collected on the diaphragm of the regulator, or covered by a durable cover.

Regulator Compartments

- ☐ Vehicle-mounted regulators installed at or below the floor level shall be installed in a compartment that provides protection against the weather and wheel spray.

- ☐ Regulator compartments shall comply with the following:

  - ☐ The compartment shall be of sufficient size to allow tool operation for connection to and replacement of the regulator(s).
  - ☐ The compartment shall be vapor-tight to the interior of the vehicle.
  - ☐ The compartment shall have a 1 in.^{2} (650 mm^2) minimum vent opening to the exterior located within 1 in. (25 mm) of the bottom of the compartment.
  - ☐ The compartment shall NOT contain flame or spark producing equipment.
  - ☐ Regulator vent outlet shall be at least 2 in. (51 mm) above the compartment vent opening.

Flexibility

- ☐ If the regulator is connected directly to the piping, flexibility shall be provided between the container valve and the regulator. This can be accomplished with the use of a pigtail listed to UL-569.
  OR;
- ☐ IF the regulator is installed directly in the container valve, a flexible connector shall be installed between the regulator outlet and the fixed piping system to protect against expansion, contraction, jarring, and vibration strains. This can be accomplished by the use of a hose listed to UL-21.

Regulator Condition

- ☐ Inspect regulators and remove them from service if there is evidence of the following:

  - ☐ Physical damage
  - ☐ Corrosion
  - ☐ Missing parts
  - ☐ Tampering
  - ☐ Exposure to fire
  - ☐ Leaks

Piping Check

PIPING CHECK

Test	Starting Pressure	Ending Pressure	Total Test Time	Status
Pressure Test[3]	psi	psi	Min.	PASS ☐ FAIL ☐ N/A ☐
[3] Pressure tests are performed ONLY on new piping installations before the appliances are connected. The test is performed with air at not less than 1.5 times the operating pressure (min of 3 psi)				
Piping and tubing materials comply with NFPA 58 (e.g. steel pipe, copper tube)				PASS ☐ FAIL ☐
Metallic pipe between the container valve and the first regulator has a min. pressure rating of 250 psi (e.g sch 80)				PASS ☐ FAIL ☐ N/A ☐
Metallic pipe downstream of the pressure regulator has a min. pressure rating of 125 psi (e.g sch 40)				PASS ☐ FAIL ☐
Piping does not have evidence of excessive corrosion, damage, exposure to fire, or leaks				PASS ☐ FAIL ☐

- ☐ **Test:** There is one row for documenting a pressure test if it is performed
- ☐ **Starting Pressure:** Record the starting pressure of the test in pounds per square inch (psi).
  Ending Pressure: Record the ending pressure of the test in pounds per square inch (psi).
- ☐ **Total Test Time:** Record the total time of the test in minutes (Min.)
- ☐ **Status:** If the test does not indicate a loss of pressure check the "PASS" box, if a loss of pressure occurs check the "FAIL" box. Check the "N/A" box if you did not perform a pressure test.
- ☐ **Piping and tubing materials comply with NFPA 58 (e.g. steel pipe, copper tube):** If the piping and tubing materials comply with NFPA 58, check the "PASS" box. If they do NOT comply, check the "FAIL" box.
- ☐ **Metallic pipe between the container valve and the first regulator has a min. pressure rating of 250 psi (e.g sch 80):** If the metallic pipe between the container valve and the first regulator has a minimum pressure rating of 250 psi, check the "PASS" box. If the pressure rating is less than 250 psi, check the "FAIL" box. If there is NOT metallic pipe installed between the container valve and the first regulator, check the "N/A" box.
- ☐ **Metallic pipe downstream of the pressure regulator has a min. pressure rating of 125 psi (e.g sch 40):** If the metallic pipe downstream of the pressure regulator has a minimum pressure rating of 125 psi, check the "PASS" box. If the pressure rating is less than 125 psi, check the "FAIL" box.
- ☐ **Piping does not have evidence of excessive corrosion, damage, exposure to fire, or leaks:** Inspect the piping. If it is suitable for continued service, check the "PASS" box. If it is NOT suitable for continued service, check the "FAIL" box and detail the reason in the "Notes" section.

Pressure Test

A Mobile Food Facility Gas System Check may include a pressure test of the gas piping. All new gas piping installed under the scope of NFPA 54 and NFPA 58 is required to be pressure tested prior to being put into service. **A pressure test must NEVER be performed when the appliances or regulators are connected to the piping system.**

The purpose of a pressure test is to verify the gas-tight integrity of gas piping following its installation or modification. There are different methods and code requirements for performing a pressure test depending on which portion of the piping is being tested.

At a minimum the pressure required for the test must be 1.5 times the operating pressure of the piping system, but not less than 3 psi.

If a leak is discovered during the pressure test, you will need to locate the source of the leak and make the repair, if trained to do so. After all leaks are located and repaired, the pressure test must be restarted and performed until no change in pressure is observed for the applicable test time.

After a successful pressure test is conducted, on the Mobile Food Facility Gas System Check form, record the following:

- ☐ Test stage location
- ☐ Starting pressure in pounds per square inch
- ☐ Ending pressure in pounds per square inch
- ☐ Total test time

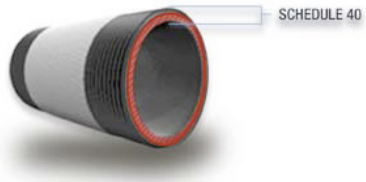
Metallic Piping Materials

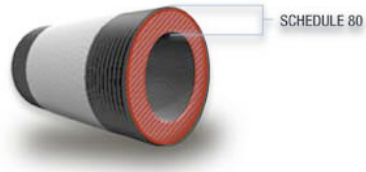
- ☐ Metallic pipe shall be wrought iron or steel (black or galvanized), brass, copper, or austenitic stainless steel and shall comply with the following:
  - ☐ Wrought iron: ASME B36.10M, *Welded and Seamless Wrought Steel Pipe.*
  - ☐ Steel pipe: ASTM A53/A53M, *Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.*
  - ☐ Steel pipe: ASTM A106/A106M, *Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service.*
  - ☐ Brass pipe: ASTM B43, *Standard Specification for Seamless Red Brass Pipe, Standard Sizes.*
  - ☐ Copper pipe: ASTM B42, *Standard Specification for Seamless Copper Pipe, Standard Sizes.*
  - ☐ Stainless pipe: ASTM A312/A312M, *Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes.*

- ☐ Metallic tubing shall be steel, stainless steel, brass, or copper, and shall comply with the following:
  - ☐ Brass tubing: ASTM B135/B135M, *Standard Specification for Seamless Brass Tube*
  - ☐ Copper tubing:
    - ☐ Type K or L: ASTM B88, S*tandard Specification for Seamless Copper Water Tube.*
    - ☐ ASTM B280, S*tandard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service.*
  - ☐ Corrugated stainless steel tubing: ANSI/CSA 6.26 (LC1), *Interior Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing.*

- ☐ Steel tubing shall have a minimum wall thickness of 0.049 in. (1.2 mm).

Metallic Pipe Pressure Rating





- ☐ Metallic pipe, tubing and their fittings shall have a minimum pressure rating of:
  - ☐ 250 psig (1.7 MPag) for the piping system between the LP-Gas container valve and the regulator installed downstream (e.g. sch 80 pipe).
  - ☐ 125 psig (0.9 MPag) for the piping system downstream of the pressure regulator. (e.g. sch 40 pipe)

Metallic Pipe Fittings

- ☐ Metallic pipe and tubing fittings shall be steel, austenitic stainless steel, brass, copper, malleable iron, or ductile (nodular) iron. Cast-iron pipe fittings shall NOT be used.

- ☐ Metallic pipe joints <u>between</u> the LP-Gas container valve and the first regulator installed downstream shall be as follows:
  - ☐ Schedule 10 pipe shall NOT be permitted.
  - ☐ Schedule 40 pipe shall be permitted to be welded or brazed.
  - ☐ Schedule 80 pipe shall be permitted to be threaded, welded, or brazed.

- ☐ Metallic pipe joints <u>downstream</u> of the pressure regulator shall be as follows:
  - ☐ Schedule 10 pipe shall be permitted to be welded, brazed, or press-connected.
  - ☐ Schedule 40 pipe shall be permitted to be threaded, welded, brazed, or press-connected.
  - ☐ Schedule 80 pipe shall be permitted to be threaded, welded, brazed, or press-connected.

Metallic Pipe Sizing

- ☐ LP-Gas vapor piping systems downstream of the first stage pressure regulator shall be sized using the sizing tables provided in NFPA 58 and installed to provide a supply of gas to meet the maximum demand of all gas utilization equipment so all appliances operate within their manufacturer's specifications.

OUTSIDE DIAMETER COPPER TUBING

Length (ft)	3/8 in. 0.315	1/2 in. 0.430	5/8 in. 0.545	3/4 in. 0.666	7/8 in. 0.785
30	309				
40	265				
50	235				
60	213				
70	196				
80	192				
90	171				

IRON AND STEEL PIPE SIZING (in.)

Nominal Inside	1/2	3/4	1	1 1/4	1 1/2	2	3	3 1/2	4
Actual	0.622	0.824	1.049	1.38	1.61	2.067	3.068	3.548	4.026
Length (ft)	Maximum Capacity in Thousands Btu/hr								
30	1843	3854	7529	14904	22331	43008	121180	177425	247168
40	1577	3298	6213	12756	19113	36809	103714	151853	211544
						32623	91920	134585	187487
						29559	83286	121943	169877
						27194	76622	112186	156285
						25299	71282	104368	145393
						23737	66882	97925	136417

CSST PIPE SIZE

Flow Designation:	13	15	18	19	23	25	30	31
Length (ft.)								
30	28	39	74	87	151	177	297	344
40	23	33	64	74	131	153	256	297
50	20	30	58	66	118	137	227	265
60	19	26	53	60	107	126	207	241
70	17	25	49	57	99	117	191	222
80	15	23	45	52	94	109	178	208
90	15	22	44	50	90	102	169	197
Capacity in thousands of Btu/hr								

Metallic Pipe Installation

- ☐ The fixed piping system shall be designed, installed, supported, and secured to minimize the possibility of damage due to vibration, strains, or wear and to preclude

any loosening while in transit.

- ☐ Piping shall be installed in a protected location.

- ☐ Where piping is installed <u>outside</u> the vehicle, it shall be installed as follows:

  - ☐ Piping shall be under the vehicle and below any insulation or false bottom.
  - ☐ Fastening or other protection shall be installed to prevent damage due to vibration or abrasion.
  - ☐ At each point where piping passes through sheet metal or a structural member, a rubber grommet or equivalent protection shall be installed to prevent chafing.

- ☐ Gas piping shall be installed to enter the vehicle through the floor directly beneath or adjacent to the appliance served.

- ☐ If a branch line is installed, the tee connection shall be located in the main gas line under the floor and outside the vehicle.

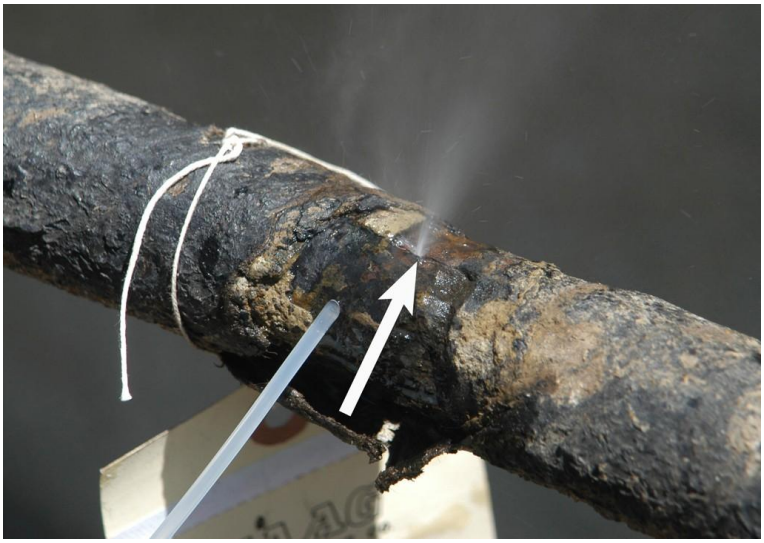
- ☐ Exposed parts of the fixed piping system either shall be of corrosion-resistant material or shall be coated or protected to minimize exterior corrosion.

- ☐ There shall be no fuel connection between a tractor and trailer or other vehicle units.

Metallic Pipe Condition

- ☐ Inspect the piping and remove it from service if there is evidence of the following:

  - ☐ Physical damage
  - ☐ Excessive corrosion
  - ☐ Kinks
  - ☐ Tampering
  - ☐ Exposure to fire
  - ☐ Leaks



Appliance Check

APPLIANCE CHECK

Appliance Type				
Manufacturer				
Model No.				
Serial No.				
Shutoff Valve?	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Secured?	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Listed[4] Gas Flex?	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Status	PASS ☐ FAIL ☐	PASS ☐ FAIL ☐	PASS ☐ FAIL ☐	PASS ☐ FAIL ☐

[4] Flexible connectors for MOVABLE appliances shall be listed to ANSI Z21.69 / CSA 6.16, NON-MOVABLE appliances shall be listed to ANSI Z21.24 / CSA 6.10 OR ANSI Z21.69 / CSA 6.16

- ☐ **Appliance Type:** Enter the appliance type (e.g. flat top, fryer, griddle, etc)
- ☐ **Manufacturer:** Enter the manufacturer's name that is found on the appliance data plate.
- ☐ **Model No.:** Enter the model number that is found on the appliance data plate.
- ☐ **Serial No.:** Enter the serial number that is found on the appliance data plate.
- ☐ **Shutoff Valve?:** If there is a shutoff valve installed in the gas piping supplying the appliance, check the "YES" box. If there is NOT a shutoff valve installed, check the "NO" box.
- ☐ **Secured?:** If the appliance is properly secured to prevent movement, check the "YES" box. If it is not properly secured, check the "NO" box.
- ☐ **Listed[4] Gas Flex?:** If there is a listed gas flex connector installed between the shutoff valve and the appliance, check the "YES" box. If there is NOT a listed gas flex connector installed, check the "NO" box.
- ☐ **Status:** Inspect the appliance. If it is suitable for continued service, check the "PASS" box. If it is NOT suitable for continued service, check the "FAIL" box and detail the reason in the "Notes" section.

Appliance Type

There are several different types of appliances used in Mobile Food Facilities, some of the more common types are listed below:

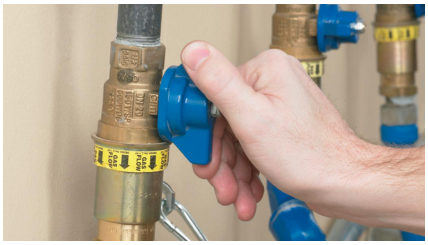
- Griddle
- Flat top grill
- Ranges
- Fryers
- Charbroiler
- Water heater
- Food warmer
- Coffee maker

It is important that appliances installed and used in a Mobile Food Facility are approved for that use. For example: it would NOT be appropriate to use a portable propane grill inside of a Mobile Food Facility.

- ☐ Cooking appliances shall be listed for commercial cooking and installed in accordance with the manufacturer's instructions.

- ☐ Space and water heating appliances shall be listed and installed in accordance with the manufacturer's instructions.

Shutoff Valve



Each gas appliance connected to the piping system shall have an accessible, approved manual shutoff valve with a nondisplaceable valve member, or a listed gas convenience outlet. Appliance shutoff valves and convenience outlets shall serve a single appliance only.

Gas Flexible Connectors

Individual gas cooking appliances shall be secured in place and connected to the gas piping system with a single appliance connector complying with the following:

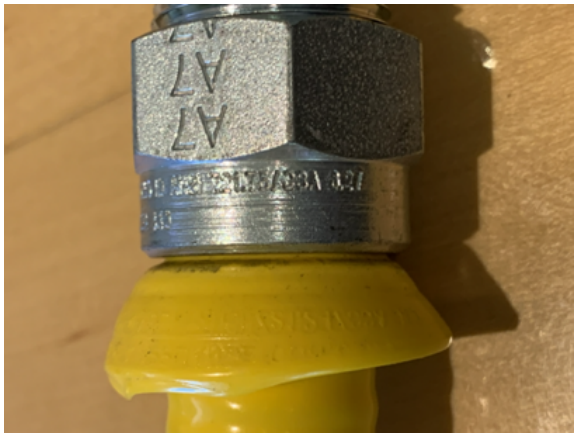
Movable Appliances

- ☐ Connectors used with appliances that are moved for cleaning and sanitation purposes and installed INSIDE of a Mobile Food Facility shall be:
  - ☐ Listed in accordance with ANSI Z21.69/CSA 6.16 – *Connectors for Movable Gas Appliances.*
  - ☐ Recommended for use on a Mobile Food Facility by the connector manufacturer.
  - ☐ Installed in accordance with the connector manufacturer's installation instructions.

Non-Movable Appliances

- ☐ Connectors used with appliances that are NOT moved for cleaning and sanitation purposes and are installed:
  - ☐ INSIDE of a Mobile Food Facility shall be:
    - ☐ Listed in accordance with at least one of the following:
    - ☐ ANSI Z21.24/CSA 6.10 – *Connectors for Gas Appliances.*
    - ☐ ANSI Z21.69/CSA 6.16 – *Connectors for Movable Gas Appliances.*
    - ☐ ANSI Z21.75/CSA 6.27 – *Connectors for Outdoor Gas Appliances and Manufactured Homes.*
    - ☐ Recommended for use on a Mobile Food Facility by the connector manufacturer.
    - ☐ Installed in accordance with the connector manufacturer's installation instructions.

- ☐ OUTSIDE of a Mobile Food Facility shall be:
  - ☐ Listed in accordance with ANSI Z21.75/CSA 6.27 – *Connectors for Outdoor Gas Appliances and Manufactured Homes.*
  - ☐ Recommended for use on a Mobile Food Facility by the connector manufacturer.
  - ☐ Installed in accordance with the connector manufacturer's installation instructions.



Appliance Condition

Check each appliance for proper installation and operation.

- ☐ Check the gas burners for proper operation, some of the items that should be checked are:
  - ☐ Check the pilot for proper burning characteristics (if equipped).
  - ☐ Check the main burner for proper burning characteristics.
  - ☐ Verify that burner ignition is satisfactory.
  - ☐ Cycle the unit to make sure the burner is operating properly.

- ☐ Check for proper clearances from combustibles.
- ☐ Check each appliance that is equipped with a combustion chamber for the following:
  - ☐ Blockage.
  - ☐ Excessive corrosion.
  - ☐ Cracks.
  - ☐ Openings.

- ☐ Inspect each appliance that is equipped with a pilot safety system to determine if it is operating properly and not subject to physical damage.
- ☐ Check each appliance that is equipped with an electronic ignition system to determine if it is operating properly and not subject to physical damage.

- ☐ Check for adequate combustion air supply.

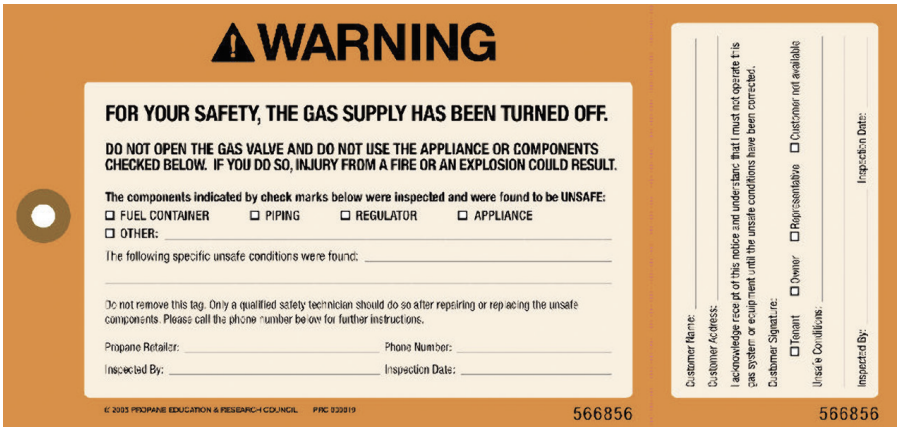
- ☐ Check each appliances venting system (if required and equipped) for the following:

    - ☐ Proper materials.
    - ☐ Adequately sized.
    - ☐ Adequate clearance to combustible materials.
    - ☐ Excessive corrosion, cracks, and other defects.
    - ☐ Securely connected to the appliance.
    - ☐ Spillage.

If an appliance needs to be taken out of service, generally the gas supply is disconnected from the appliance and the open line is capped or plugged and a "WARNING" tag is applied to the appliance or part of the gas system being removed from service.

Explain your findings to the customer and advise them that you have removed the appliance from service for their safety and have tagged it. The appliance may not be operated until a repair is made or a replacement is installed.

Follow your company's policy in regards to taking appliances out of service.


WARNING

FOR YOUR SAFETY, THE GAS SUPPLY HAS BEEN TURNED OFF.

DO NOT OPEN THE GAS VALVE AND DO NOT USE THE APPLIANCE OR COMPONENTS CHECKED BELOW. IF YOU DO SO, INJURY FROM A FIRE OR AN EXPLOSION COULD RESULT.

The components indicated by check marks below were inspected and were found to be UNSAFE:
☐ FUEL CONTAINER ☐ PIPING ☐ REGULATOR ☐ APPLIANCE
☐ OTHER: _____
The following specific unsafe conditions were found: _____

Do not remove this tag. Only a qualified safety technician should do so after repairing or replacing the unsafe components. Please call the phone number below for further instructions.

Propane Retailer: _____ Phone Number: _____
Inspected By: _____ Inspection Date: _____

© 2005 PROPANE EDUCATION & RESEARCH COUNCIL PRC 000019

566856

Customer Name: _____
Customer Address: _____
I acknowledge receipt of this notice and understand that I must not operate this gas system or equipment until the unsafe conditions have been corrected.
Customer Signature: _____
☐ Tenant ☐ Owner ☐ Representative ☐ Customer not available
Unsafe Conditions: _____
Inspected By: _____ Inspection Date: _____

566856

This tag (product no. PRC-000019) is available for purchase at: https://www.propane.com

System Leak Check

SYSTEM LEAK CHECK

Test Location	Starting Pressure	Ending Pressure	Total Test Time	Status
High Pressure[5]	psi	psi	Min.	PASS ☐ FAIL ☐ N/A ☐
Low Pressure	w.c.	w.c.	Min.	PASS ☐ FAIL ☐ N/A ☐
[5] High pressure test location is between the container service valve and the first regulator (e.g. block test)				

- ☐ **Test Location:** Complete the row that corresponds with the test you performed (high pressure or low pressure).
- ☐ **Starting Pressure:** Record the starting pressure of the test in pounds per square inch (psi) for a high pressure test, or inches of water column (W.C.) for low pressure test.
- ☐ **Ending Pressure:** Record the ending pressure of the test in pounds per square inch (psi) for a high pressure test, or inches of water column (W.C.) for low pressure test.
- ☐ **Total Test Time:** Record the total time of the test in minutes (Min.)
- ☐ **Status:** If the test does not indicate a loss of pressure check the "PASS" box, if a loss of pressure occurs check the "FAIL" box. Check the "N/A" box if you did not perform that particular test.

Performing A Leak Check

A Mobile Food Facility Gas System Check includes a system leak check. The purpose of a leak check is to verify if the gas piping system has any leaks that could potentially create an unsafe condition for your customer. There are several methods for performing a system leak check. Two commonly used techniques for performing a system leak check are:

1. A pressure gauge placed between the container service valve and the first-stage regulator (high-pressure/block test).

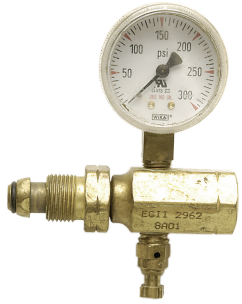
2. A manometer or equivalent device to measure the gas pressure in a low-pressure line between the outlet of the final-stage regulator and the appliance (low-pressure/manometer test).

There could be other methods used by your company. Check with your supervisor for the proper method(s) you are expected to utilize when conducting a leak check.

Using A Test-Block Gauge

A 0-300 psi pressure gauge, such as a test-block gauge, can be used to conduct a leak check. It is installed between the container service valve and the first-stage or integral 2-stage regulator.

A test-block gauge is only one type of gauge setup that may be used. Other high-pressure gauges may also be used. Some installations have a pressure tap on the inlet side of the first-stage regulator. There are other versions of this type of test tap setup as well.



A significant difference between using a water manometer and the block gauge is that when using the manometer all of the regulators in the system are open and unlocked. When using the block gauge, all regulators in the system are locked.

For the test-block gauge to indicate a leak in the system, the regulator would need to sense a drop in pressure downstream of it before it would unlock or open.

Do NOT use this test on systems with multiple containers that are NOT manifolded together prior to the first system regulator.

Performing a Leak Check Using a Test-Block Gauge

Step 1: Close the container service valve(s) and inspect the gas system according to your company policy.
Step 2: Install the block gauge between the container service valve and the inlet of the first regulator in the system.
Step 3: SLOWLY open the service valve on the propane storage container. Leave it open for two or three seconds, and then close it.
Step 4: Reduce the pressure reading on the block gauge by 10 psig lower than the container pressure. This is done by loosening the bleeder on the test-block gauge. The pressure reading during this step is dependent upon the ambient temperature of the container. If the gas pressure increases above this reduced pressure, you must then check to ensure all service valves are fully closed and then restart the leak check. If you observe another pressure increase, the container service valve(s) will likely need to be repaired or replaced in order to properly complete a leak check.
Step 5: Allow the vapor distribution system to remain pressurized for **three minutes** without showing an increase or decrease in the reading on the gauge.
Step 6: Once the vapor distribution system is proven to be leak free, record the test pressure and the amount of time it took to perform the test.

Step 7: Remove the block gauge and reconnect the regulator to the container service valve using the appropriate connector.
Step 8: Open the service valve(s) on the tank to repressurize the system.
Step 9: Check for leaks at the service valve connection and regulator inlet connection using a suitable leak detection solution or device.

Using A Manometer

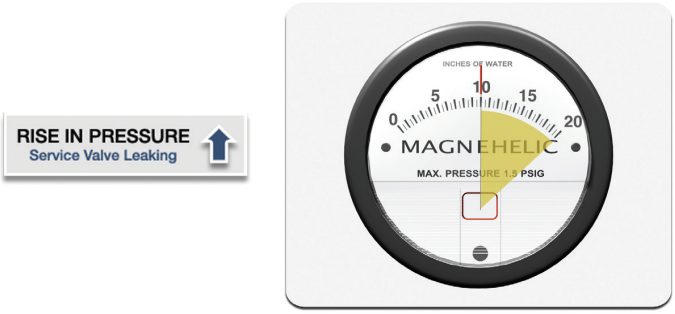
A manometer is a gauging device used to measure gas pressure at low levels, such as the interior piping inside a mobile food facility. Piping systems that supply appliances with gas at pressures of ½ psig or less may be leak checked by inserting a water manometer downstream of the final-stage regulator. In this test, all of the regulators in the system must be open and unlocked.

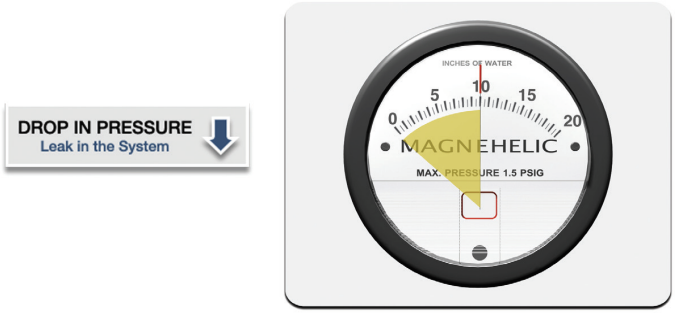
A water manometer may be connected to a regulator outlet test tap, to a special test adaptor downstream of the appliance shutoff valve, or directly to the inlet of an appliance gas control valve test tap. Be certain the manometer is filled with water according to the manufacturer's instructions and is set to a zero reading before testing.

You can also use an electronic manometer, which works on the same principle as a water manometer, but gives a digital reading instead of a water level reading. You can also use a magnehelic gauge, or a 0-35" water column (w.c.) pressure gauge kit, which gives a dial reading. Any gas pressure measuring device should be properly calibrated according to the manufacturer's instructions.

Performing a Leak Check Using a Manometer

Step 1: Close the container service valve(s) and inspect the gas system according to your company policy.
Step 2: Using the appropriate fitting and hose, connect the water manometer somewhere downstream of the final-stage regulator but before the appliance gas control valve outlet test tap. This example shows a service technician tapping into the inlet side of the gas control valve by removing the inlet test tap and installing a barbed adapter to connect the manometer.
Step 3: SLOWLY open the service valve on the propane storage container. Leave it open for two or three seconds, and then close it.
Step 4: Release enough gas from the vapor distribution system to drop the system pressure to 9" +/- ½" w.c. on the manometer. This ensures that all regulators in the system are unlocked and that a leak anywhere in the system is communicated to the gauging device. If the gas pressure increases above the 9" +/- ½" w.c., you must then check to ensure the service valve is fully closed and then restart the leak check. If you observe another pressure increase, the container service valve will likely need to be repaired or replaced in order to complete a valid leak check.
Step 5: Allow the vapor distribution system to remain pressurized for **three minutes** without showing an increase or decrease in the reading on the manometer. Once the vapor distribution system is proven to be leak free, record the test pressure and the amount of time it took to perform the test according to your company policy.





Step 6: Close the appliance's manual gas shutoff valve, disconnect the water manometer and any fittings used, and reconnect the appliance line.
Step 7: Open the service valve(s) on the storage container to repressurize the system.

If a leak is discovered during the inspection, you will need to locate the source of the leak by:

- ☐ Using a combustible gas detector.
- ☐ Using a suitable leak-detection solution.
- ☐ Performing an isolated test and inspection of piping segments.

If a leak is discovered it must be located and repaired, or the system taken out of service. If a leak is repaired, the leak check must be restarted and performed until no change in pressure is observed for the applicable test time.

Be sure to follow your company's procedures.

Miscellaneous Checks

MISCELLANEOUS CHECKS

A functional LP-Gas alarm is installed within the vehicle	PASS ☐ FAIL ☐
A permanent caution plate is affixed to either the appliance or the vehicle outside of any enclosure adjacent to the container(s)	PASS ☐ FAIL ☐

- ☐ **A functional LP-Gas alarm is installed within the vehicle:** If a functional gas LP-Gas alarm is installed within the vehicle, check the "PASS" box. If it does NOT contain an LP-Gas alarm or it is not functioning, check the "FAIL" box.
- ☐ **A permanent caution plate is affixed to either the appliance or the vehicle outside of any enclosure adjacent to the container(s):** If an approved caution plate is affixed to either the appliance or the vehicle as required, check the "PASS" box. If the plate is NOT installed, check the "FAIL" box.

LP-Gas Alarm

- ☐ A functional LP-Gas alarm must be located within the vehicle. Test the alarm per the manufacturer's instructions.

Labeling

- ☐ A permanent caution plate shall be affixed to either the appliance or the vehicle outside of any enclosure adjacent to the container(s). The caution plate shall include the following text:

CAUTION:

1. Be sure all appliance valves are closed before opening container valve.
2. Connections at the appliances, regulators, and containers shall be checked periodically for leaks with soapy water or its equivalent.
3. Never use a match or flame to check for leaks.
4. Container valves shall be closed when equipment is not in use

Notes

NOTES

Use this space to record any notes regarding defects or areas of concern found during your inspection.

Inspection Company Info

INSPECTION COMPANY INFO

Company Name			NV-LPGB License No.		
Address					
City		State		Zip	
Email			Telephone		

I, _____ certify that I hold Nevada LP-Gas Board COC number _____ and
Inspector *(printed name)*

that I have completed the LP-Gas system check as described above and the system:

☐ PASSED (approved inspection decal applied)

☐ FAILED (see notes above for violations)

_____ _____
Inspector *(signature)* Date

- ☐ **Company Name:** Enter the name of the company performing the inspection.
- ☐ **NV-LPGB License No.:** Enter the Nevada LP-Gas Board license number of the company.
- ☐ **Address:** Enter the address of the company.
- ☐ **City:** Enter the city of the company.
- ☐ **State:** Enter the state of the company.
- ☐ **Zip:** Enter the zip code of the company.
- ☐ **Email:** Enter the email address of the company.
- ☐ **Telephone:** Enter the telephone number of the company.

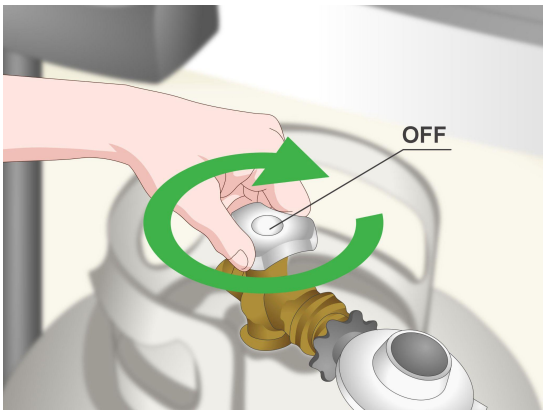
☐ Print your name and sign the form in the spaces provided. Enter your Certificate of Competency (COC) number issued by the Nevada LP-Gas Board in the space provided.

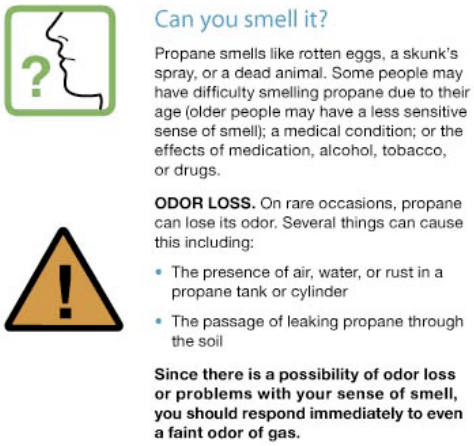
☐ If the gas system on the Mobile Food Facility meets the requirements of NFPA 58 for continued service check the "PASSED" box and place a properly filled out, and dated, LP-Gas Board approved "Mobile Food Facility Inspected" decal on the outside of the vehicle in an approved location. If any of the inspection areas received a "FAIL" or other compliance issues are detected, check the "FAILED" box and state the reason(s) why in the "Notes" section.

Safety Information Review with Customer

- ☐ Talk to the customer about propane safety and provide safety materials.
- ☐ Explain to the customer what to do if they smell a gas odor or suspect there might be a gas leak.
- ☐ Show the customer where to shut off the gas at the tank or cylinder.
- ☐ Confirm that the customer knows what propane smells like.
- ☐ Provide propane safety materials for your customer to read and share with all of their employees.

This brochure (product no. PRC-003121) and the spanish version (product no. PRC-003121S) are available for purchase at: https://www.propane.com





Can you smell it?

Propane smells like rotten eggs, a skunk's spray, or a dead animal. Some people may have difficulty smelling propane due to their age (older people may have a less sensitive sense of smell); a medical condition; or the effects of medication, alcohol, tobacco, or drugs.

ODOR LOSS. On rare occasions, propane can lose its odor. Several things can cause this including:

- The presence of air, water, or rust in a propane tank or cylinder
- The passage of leaking propane through the soil

Since there is a possibility of odor loss or problems with your sense of smell, you should respond immediately to even a faint odor of gas.

Customer Review of Inspection Form

Customer Acknowledgement: I understand the annual gas system Inspection on the mobile food facility listed above has been completed as described above. I also acknowledge that the individual performing the Mobile Food Facility Gas System Check informed me of the procedure and the outcome of the inspection; what was covered by the inspection and what was not covered; what repairs and/or alterations, if any, were made to the gas system or appliances; and the options available for making recommended changes to my gas system. I further acknowledge, by initialing each of the following items, that:

_____ I have smelled propane gas and can detect it its odor

_____ I have been told what to do if I smell a gas odor or otherwise suspect a gas leak and have been shown how to turn off the gas at the container

_____ I have received safety information and been told to read it and share it with all persons working in the mobile food facility

I, _____ have read and fully understand this certification.

Customer *(printed name)*

_____ _____

Customer *(signature)* Date

- ☐ Thoroughly review the inspections and testing completed on the system components and piping during the Mobile Food Facility Gas System Check and ensure the customer is aware that only the items listed on the form were covered during this inspection. Make sure the customer fully understands what work was done and any recommendations you made. For example, if a problem or issue was found during the inspection, clearly note in the notes section of the form what was done to correct that condition or what follow-up is required.

- ☐ Have the customer read the customer acknowledgement section of the form. You can also read this section to them. Ask the customer to initial each of the items in this section, acknowledging that they understand the Mobile Food Facility Gas System Check procedure, repairs completed, recommended actions, and general propane safety information, and are satisfied with the work performed.

- ☐ Ask the customer if they have any additional questions, comments, or concerns. Make sure all of their questions are answered. If you cannot answer a question, tell the customer you will contact your supervisor and follow up with them.

- ☐ Finally, have the customer enter the date and have them print and sign their name acknowledging that they have read and fully understand the inspection and certification. Provide a copy of the form to the customer and return the original to your office to be placed in the customer's file. This inspection form is extremely important and needs to be retained according to your company policy.

Summary and Conclusion

The LP-Gas Board is committed to providing the highest level of safety and service to its licensees and members of the public. By properly completing and documenting a Mobile Food Facility Gas System Check, you can assure your customers that their system is operating in a safe and efficient manner at the time of inspection.

Appendix

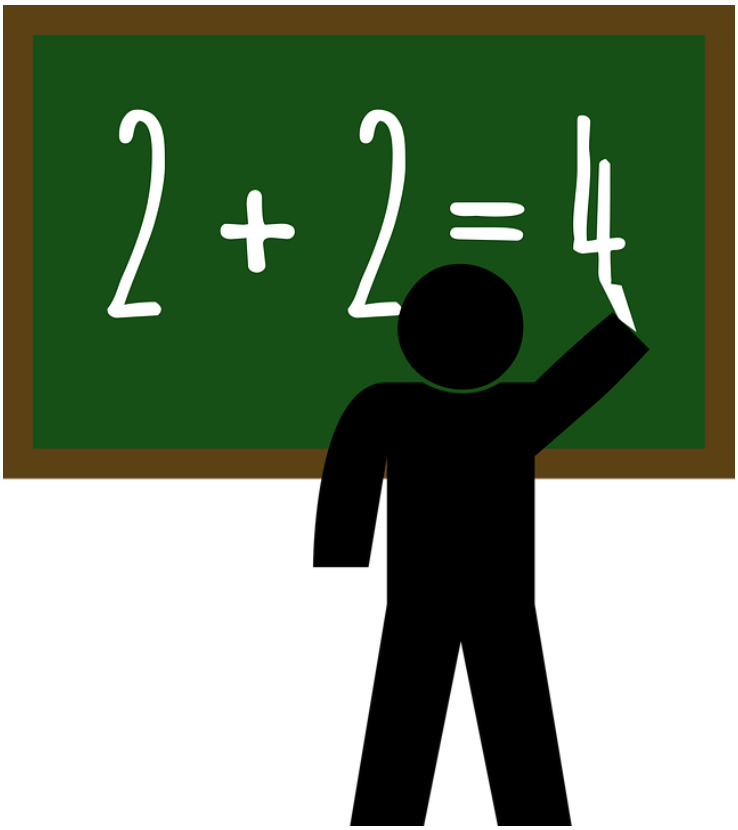
Mobile Food Facility Gas System Check EXAMPLES

The following are a few examples on how to document typical tests and checks that may be performed as part of a Mobile Food Facility Gas System Check.

The sample information and pressure readings listed in each of these examples is for training purposes only and should not be interpreted to represent the actual normal operating pressure of any specific stage of the system or component being tested.

When performing a Mobile Food Facility Gas System Check and completing the form you will enter the actual data you gathered during the inspection.

EXAMPLES



Performing A Container Check

Single ASME Tank System Check EXAMPLE:

CONTAINER CHECK

Container Type	ASME ✔ DOT ☐	ASME ☐ DOT ☐	ASME ☐ DOT ☐	ASME ☐ DOT ☐
Manufacturer	*Manchester Tank*	–	–	–
Serial No.	*42793386*	–	–	–
Mfg. Date	*2012*	–	–	–
Recert Date	N/A ✔	N/A ☐	N/A ☐	N/A ☐
Water Capacity (WC)	*40* gal. ✔ lb. ☐	gal. ☐ lb. ☐	gal. ☐ lb. ☐	gal. ☐ lb. ☐
Proper Condition[1]?	YES ✔ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Proper Location[2]?	YES ✔ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Status	PASS ✔ FAIL ☐	PASS ☐ FAIL ☐	PASS ☐ FAIL ☐	PASS ☐ FAIL ☐

[1] Containers do not have evidence of damage, dents, gouges, excessive corrosion, exposure to fire, or leaks
[2] Containers are securely mounted, protected from damage. are NOT mounted on the roof, ahead of the front axle (on a drive vehicle), or beyond the rear bumper. Containers are NOT installed (unless allowed by NFPA 58), transported, or stored inside the vehicle. Containers are NOT installed less than 18" from a heat producing appliance, component, or vent

The maximum aggregate propane capacity of containers on the vehicle used for cooking appliances is ≤ 200 lbs.	PASS ✔ FAIL ☐

NOTE: To determine the aggregate propane capacity in pounds, combine the water capacity in gallons of the ASME tanks and multiply by 3.36 Example: 40 x 3.36 = 134.4 lb

Dual DOT Cylinder System Check EXAMPLE:

CONTAINER CHECK

Container Type	ASME ☐ DOT ✔	ASME ☐ DOT ✔	ASME ☐ DOT ☐	ASME ☐ DOT ☐
Manufacturer	*Worthington*	*Manchester*	–	–
Serial No.	*B1790432*	*M-8826333*	–	–
Mfg. Date	*10-15*	*01-08*	–	–
Recert Date	N/A ✔	*01-20E* N/A ☐	N/A ☐	N/A ☐
Water Capacity (WC)	*238* gal. ☐ lb. ✔	*239* gal. ☐ lb. ✔	gal. ☐ lb. ☐	gal. ☐ lb. ☐
Proper Condition[1]?	YES ✔ NO ☐	YES ✔ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Proper Location[2]?	YES ✔ NO ☐	YES ✔ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Status	PASS ✔ FAIL ☐	PASS ✔ FAIL ☐	PASS ☐ FAIL ☐	PASS ☐ FAIL ☐

[1] Containers do not have evidence of damage, dents, gouges, excessive corrosion, exposure to fire, or leaks
[2] Containers are securely mounted, protected from damage. are NOT mounted on the roof, ahead of the front axle (on a drive vehicle), or beyond the rear bumper. Containers are NOT installed (unless allowed by NFPA 58), transported, or stored inside the vehicle. Containers are NOT installed less than 18" from a heat producing appliance, component, or vent

The maximum aggregate propane capacity of containers on the vehicle used for cooking appliances is ≤ 200 lbs.	PASS ✔ FAIL ☐

NOTE: To determine the aggregate propane capacity in pounds combine the water capacity in pounds of the cylinders and multiply by 0.42. Example: (238 + 239) x 0.42 = 200 lb

Performing A Pigtail & Hose Check

Pigtail ONLY System Check EXAMPLE:

PIGTAIL & HOSE CHECK

Pigtails are listed to UL-569	PASS ✔ FAIL ☐ N/A ☐
LP-Gas hoses are listed to UL-21 and are installed outside of the vehicle	PASS ☐ FAIL ☐ N/A ✔
Hoses are marked “LP-GAS HOSE” or LPG HOSE”, and have a minimum working pressure (WP) of 350 psig	PASS ☐ FAIL ☐ N/A ✔
Pigtails and hoses do not have evidence of damage, cracking, cuts, bulges, kinks, exposure to fire, or leaks	PASS ✔ FAIL ☐

Hose ONLY System Check EXAMPLE:

PIGTAIL & HOSE CHECK

Pigtails are listed to UL-569	PASS ☐ FAIL ☐ N/A ✔
LP-Gas hoses are listed to UL-21 and are installed outside of the vehicle	PASS ✔ FAIL ☐ N/A ☐
Hoses are marked “LP-GAS HOSE” or LPG HOSE”, and have a minimum working pressure (WP) of 350 psig	PASS ✔ FAIL ☐ N/A ☐
Pigtails and hoses do not have evidence of damage, cracking, cuts, bulges, kinks, exposure to fire, or leaks	PASS ✔ FAIL ☐

Pigtail & Hose System Check EXAMPLE:

PIGTAIL & HOSE CHECK

Pigtails are listed to UL-569	PASS ✔ FAIL ☐ N/A ☐
LP-Gas hoses are listed to UL-21 and are installed outside of the vehicle	PASS ✔ FAIL ☐ N/A ☐
Hoses are marked “LP-GAS HOSE” or LPG HOSE”, and have a minimum working pressure (WP) of 350 psig	PASS ✔ FAIL ☐ N/A ☐
Pigtails and hoses do not have evidence of damage, cracking, cuts, bulges, kinks, exposure to fire, or leaks	PASS ✔ FAIL ☐

Performing A Regulator Check

Integral Two-Stage (11" w.c.) System Check EXAMPLE:

REGULATOR CHECK

Regulator Type	Outlet Set Pressure	Flow Pressure	Lock Up Pressure	Status
Integral Two-Stage	*11"* psi ☐ w.c. ✔	*10"* psi ☐ w.c. ✔	*12.5"* psi ☐ w.c. ✔	PASS ✔ FAIL ☐ N/A ☐
First Stage	– psi	– psi	– psi	PASS ☐ FAIL ☐ N/A ✔
Middle Stage	– psi	– psi	– psi	PASS ☐ FAIL ☐ N/A ✔
Final Stage	– w.c.	– w.c.	– w.c.	PASS ☐ FAIL ☐ N/A ✔

Regulators **NOT** installed in a compartment have their vents installed pointing down or protected by a durable cover	PASS ✔ FAIL ☐ N/A ☐
IF the regulators are installed in a compartment, the compartment is vented	PASS ☐ FAIL ☐ N/A ✔
IF the regulator is connected directly to the **piping**, flexibility is provided between the container valve and the regulator (e.g. pigtail, hose)	PASS ✔ FAIL ☐ N/A ☐
IF the regulator is installed directly in the **container valve**, flexibility is provided between the regulator and the piping (e.g. hose).	PASS ☐ FAIL ☐ N/A ✔
Regulators do not have evidence of excessive corrosion, damage, exposure to fire, or leaks	PASS ✔ FAIL ☐

Integral Two-Stage (2 psi) with a Final Stage System Check EXAMPLE:

REGULATOR CHECK

Regulator Type	Outlet Set Pressure	Flow Pressure	Lock Up Pressure	Status
Integral Two-Stage	*2* psi ✔ w.c. ☐	*2* psi ✔ w.c. ☐	*2* psi ✔ w.c. ☐	PASS ✔ FAIL ☐ N/A ☐
First Stage	– psi	– psi	– psi	PASS ☐ FAIL ☐ N/A ✔
Middle Stage	– psi	– psi	– psi	PASS ☐ FAIL ☐ N/A ✔
Final Stage	*11"* w.c.	*10.5"* w.c.	*12"* w.c.	PASS ✔ FAIL ☐ N/A ☐

Regulators **NOT** installed in a compartment have their vents installed pointing down or protected by a durable cover	PASS ✔ FAIL ☐ N/A ☐
IF the regulators are installed in a compartment, the compartment is vented	PASS ☐ FAIL ☐ N/A ✔
IF the regulator is connected directly to the **piping**, flexibility is provided between the container valve and the regulator (e.g. pigtail, hose)	PASS ✔ FAIL ☐ N/A ☐
IF the regulator is installed directly in the **container valve**, flexibility is provided between the regulator and the piping (e.g. hose).	PASS ☐ FAIL ☐ N/A ✔
Regulators do not have evidence of excessive corrosion, damage, exposure to fire, or leaks	PASS ✔ FAIL ☐

Two-Stage System Check EXAMPLE:

REGULATOR CHECK

Regulator Type	Outlet Set Pressure	Flow Pressure	Lock Up Pressure	Status
Integral Two-Stage	psi ☐ w.c. ☐	psi ☐ w.c. ☐	psi ☐ w.c. ☐	PASS ☐ FAIL ☐ N/A ✔
First Stage	*10* psi	*10* psi	*10.1* psi	PASS ✔ FAIL ☐ N/A ☐
Middle Stage	*–* psi	*–* psi	*–* psi	PASS ☐ FAIL ☐ N/A ✔
Final Stage	*11″* w.c.	*10.5″* w.c.	*12″* w.c.	PASS ✔ FAIL ☐ N/A ☐

Regulators **NOT** installed in a compartment have their vents installed pointing down or protected by a durable cover	PASS ✔ FAIL ☐ N/A ☐
IF the regulators are installed in a compartment, the compartment is vented	PASS ☐ FAIL ☐ N/A ✔
IF the regulator is connected directly to the **piping**, flexibility is provided between the container valve and the regulator (e.g. pigtail, hose)	PASS ☐ FAIL ☐ N/A ✔
IF the regulator is installed directly in the **container valve**, flexibility is provided between the regulator and the piping (e.g. hose).	PASS ✔ FAIL ☐ N/A ☐
Regulators do not have evidence of excessive corrosion, damage, exposure to fire, or leaks	PASS ✔ FAIL ☐

Three-Stage System Check EXAMPLE:

REGULATOR CHECK

Regulator Type	Outlet Set Pressure	Flow Pressure	Lock Up Pressure	Status
Integral Two-Stage	psi ☐ w.c. ☐	psi ☐ w.c. ☐	psi ☐ w.c. ☐	PASS ☐ FAIL ☐ N/A ✔
First Stage	*10* psi	*10* psi	*10.1* psi	PASS ✔ FAIL ☐ N/A ☐
Middle Stage	*2* psi	*2* psi	*2.2* psi	PASS ✔ FAIL ☐ N/A ☐
Final Stage	*11″* w.c.	*10″* w.c.	*11.5″* w.c.	PASS ✔ FAIL ☐ N/A ☐

Regulators **NOT** installed in a compartment have their vents installed pointing down or protected by a durable cover	PASS ☐ FAIL ☐ N/A ✔
IF the regulators are installed in a compartment, the compartment is vented	PASS ✔ FAIL ☐ N/A ☐
IF the regulator is connected directly to the **piping**, flexibility is provided between the container valve and the regulator (e.g. pigtail, hose)	PASS ☐ FAIL ☐ N/A ✔
IF the regulator is installed directly in the **container valve**, flexibility is provided between the regulator and the piping (e.g. hose).	PASS ✔ FAIL ☐ N/A ☐
Regulators do not have evidence of excessive corrosion, damage, exposure to fire, or leaks	PASS ✔ FAIL ☐

Single-Stage System Check EXAMPLE:

REGULATOR CHECK

Regulator Type	Outlet Set Pressure	Flow Pressure	Lock Up Pressure	Status
Integral Two-Stage	psi ☐ w.c. ☐	psi ☐ w.c. ☐	psi ☐ w.c. ☐	PASS ☐ FAIL ☐ N/A ✔
First Stage	– psi	– psi	– psi	PASS ☐ FAIL ☐ N/A ✔
Middle Stage	– psi	– psi	– psi	PASS ☐ FAIL ☐ N/A ✔
Final Stage	*11"* w.c.	*10.5"* w.c.	*11.5"* w.c.	PASS ✔ FAIL ☐ N/A ☐

Regulators **NOT** installed in a compartment have their vents installed pointing down or protected by a durable cover	PASS ✔ FAIL ☐ N/A ☐
IF the regulators are installed in a compartment, the compartment is vented	PASS ☐ FAIL ☐ N/A ✔
IF the regulator is connected directly to the **piping**, flexibility is provided between the container valve and the regulator (e.g. pigtail, hose)	PASS ☐ FAIL ☐ N/A ✔
IF the regulator is installed directly in the **container valve**, flexibility is provided between the regulator and the piping (e.g. hose).	PASS ✔ FAIL ☐ N/A ☐
Regulators do not have evidence of excessive corrosion, damage, exposure to fire, or leaks	PASS ✔ FAIL ☐

NOTE: Single stage regulators may ONLY be used for portable appliances and outdoor cooking appliances with input ratings ≤ 100,000 btu/hr (29 kW).

Performing A Piping Check

Pressure Test EXAMPLE:

PIPING CHECK

Test	Starting Pressure	Ending Pressure	Total Test Time	Status
Pressure Test[3]	10 psi	10 psi	10 Min.	PASS ✔ FAIL ☐ N/A ☐
[3] Pressure tests are performed ONLY on new piping installations before the appliances are connected. The test is performed with air at not less than 1.5 times the operating pressure (min of 3 psi)				
Piping and tubing materials comply with NFPA 58 (e.g. steel pipe, copper tube)				PASS ✔ FAIL ☐
Metallic pipe between the container valve and the first regulator has a min. pressure rating of 250 psi (e.g sch 80)				PASS ☐ FAIL ☐ N/A ✔
Metallic pipe downstream of the pressure regulator has a min. pressure rating of 125 psi (e.g sch 40)				PASS ✔ FAIL ☐
Piping does not have evidence of excessive corrosion, damage, exposure to fire, or leaks				PASS ✔ FAIL ☐

NO Pressure Test EXAMPLE:

PIPING CHECK

Test	Starting Pressure	Ending Pressure	Total Test Time	Status
Pressure Test[3]	– psi	– psi	– Min.	PASS ☐ FAIL ☐ N/A ✔
[3] Pressure tests are performed ONLY on new piping installations before the appliances are connected. The test is performed with air at not less than 1.5 times the operating pressure (min of 3 psi)				
Piping and tubing materials comply with NFPA 58 (e.g. steel pipe, copper tube)				PASS ✔ FAIL ☐
Metallic pipe between the container valve and the first regulator has a min. pressure rating of 250 psi (e.g sch 80)				PASS ✔ FAIL ☐ N/A ☐
Metallic pipe downstream of the pressure regulator has a min. pressure rating of 125 psi (e.g sch 40)				PASS ✔ FAIL ☐
Piping does not have evidence of excessive corrosion, damage, exposure to fire, or leaks				PASS ✔ FAIL ☐

Performing An Appliance Check

Three Appliances EXAMPLE:

APPLIANCE CHECK

Appliance Type	*Fryer*	*Flat Top*	*Charbroiler*	–
Manufacturer	*Frymaster*	*Vulcan*	*Hobart*	–
Model No.	*FR-7729485-LP*	*FT400592K*	*239439586CB*	–
Serial No.	*B2094857762H34*	*BXC394857112*	*394K204L55002*	–
Shutoff Valve?	YES ✔ NO ☐	YES ✔ NO ☐	YES ✔ NO ☐	YES ☐ NO ☐
Secured?	YES ✔ NO ☐	YES ✔ NO ☐	YES ✔ NO ☐	YES ☐ NO ☐
Listed[4] Gas Flex?	YES ✔ NO ☐	YES ✔ NO ☐	YES ✔ NO ☐	YES ☐ NO ☐
Status	PASS ✔ FAIL ☐	PASS ✔ FAIL ☐	PASS ✔ FAIL ☐	PASS ☐ FAIL ☐

[4] Flexible connectors for MOVABLE appliances shall be listed to ANSI Z21.69 / CSA 6.16, NON-MOVABLE appliances shall be listed to ANSI Z21.24 / CSA 6.10 OR ANSI Z21.69 / CSA 6.16

Performing A Leak Check

High Pressure/Block Test EXAMPLE:

SYSTEM LEAK CHECK

Test Location	Starting Pressure	Ending Pressure	Total Test Time	Status
High Pressure[5]	*90* psi	*90* psi	*3* Min.	PASS ✔ FAIL ☐ N/A ☐
Low Pressure	– w.c.	– w.c.	– Min.	PASS ☐ FAIL ☐ N/A ✔

[5] High pressure test location is between the container service valve and the first regulator (e.g. block test)

Low Pressure/Manometer Test EXAMPLE:

SYSTEM LEAK CHECK

Test Location	Starting Pressure	Ending Pressure	Total Test Time	Status
High Pressure[5]	– psi	– psi	– Min.	PASS ☐ FAIL ☐ N/A ✔
Low Pressure	*9* w.c.	*9* w.c.	*3* Min.	PASS ✔ FAIL ☐ N/A ☐

[5] High pressure test location is between the container service valve and the first regulator (e.g. block test)

Decal Requirements

Below are the inspection decal requirements set forth by the Nevada LP-Gas Board. The Board also can provide you a graphic design file of the decal if you contact them.

1. DECAL REQUIREMENTS

    a. The decal construction shall comply with all of the following:
        i. Manufactured of vinyl or equally durable material;
        ii. Self adhesive;
        iii. Weather resistant;
        iv. UV resistant;
        v. Background printed in Pantone ® Yellow 109U; and
        vi. Text, borders, and graphics printed in Pantone ® Process Black C
    b. The decal shall be printed by a printing company with the following information:
        i. The words "MOBILE FOOD FACILITY INSPECTED";
        ii. The name, address and telephone number of the person, firm or corporation licensed by the Nevada LP-Gas Board;
        iii. The Board seal;
        iv. The words "License No." and the license number issued by the NV LP-Gas Board;
        v. The words "COC No." and a place to write in the inspectors COC number;
        vi. The words "DO NOT REMOVE" ;
        vii. The word Year" followed by seven (7) two-digit years listed sequentially starting with the year the decal was printed
        viii. The word "Month" followed by the numbers 1 through 12;
        ix. The word "Day" followed by the numbers 1 through 31; and
        x. The decal shall be 3 ½" inches in diameter and be in the following form:

2. DECAL APPROVAL
    a. The decal shall be approved by the Board Staff before it is used in the field.
    b. A sample of the decal Shall be on file with the Board Staff.

3. DECAL INSTALLATION
    a. The decal shall be accurately punched to indicate the date the inspection was performed.
    b. The inspector performing the inspection shall write on the decal with permanent ink their COC number.
    c. The decal shall be attached to the exterior of the mobile food facility in the vicinity of the propane containers as to be readily visible for inspection.

Contact Information

For information or questions regarding this document or licensing requirements:

Nevada LP-Gas Board
P.O. Box 338
Carson City, NV
https://www.nvlpgasboard.com
(775) 687-4890

For information regarding the codes this document is based on:

National Fire Protection Association (NFPA)
1 Batterymarch Park
Quincy, Massachusetts
USA 02169-7471
https://www.nfpa.org
(800) 344-3555

International Code Council (ICC)
500 New Jersey Avenue, NW
6th Floor, Washington, DC 20001
https://www.iccsafe.org
(888) 422-7233

For information regarding propane, and propane training:

Propane Education & Research Council
1140 Connecticut Ave. NW, Suite 1075
Washington, DC 20036
https://www.propane.com
(202) 452-8975

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